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ABSTRACT

Using the Watson-Barker Listening Test Form A and Form B as pretest and posttest at the freshman level, this research attempted to determine whether the two forms of the test and the differences between pretest and posttest would be significant predictors of students' final grade point average (GPA). Each form of the test was taken by 190 students from a small private, Christian liberal arts college in the Midwest. Results indicated that, while each test form has significance against GPA scores, the correlation was not high enough to predict final GPA, and the difference between pre- and posttest had no predictive value when correlated with GPA. (Contains 3 tables of data and 9 references.) (Author/NKA)

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THE PREDICTIVE VALUE OF THE WATSON-BARKER LISTENING TEST

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The Predictive Value of the Watson-Barker Listening Test

Using the Watson-Barker Listening Test Form A and Form B as pretest and posttest at the Freshman level, this research attempted to determine whether the two forms of the test and the differences between pretest and posttest would be significant predictors of students' final GPA. The results indicated that, while each test form had significance against GPA scores, the correlation was not high enough to predict final GPA, and the difference between pre- and posttest had no predictive value when correlated with GPA.

Introduction

In the May 1982 *Listening Post*, McKibben reported on the use of the Brown-Carlsen Listening Comprehension Test to evaluate the listening skills of students enrolled in the College of Basic Studies at the University of Hartford. McKibben noted that one direction of future research would be

> a study of the most significant indicators of academic success in our Basic Studies program. We are correlating the Brown-Carlsen Listening Comprehension Test scores with Nelson-Denny Reading Test vocabulary, comprehension, and total reading scores, rank in high school class, SAT mathematics and verbal scores, and secondary school Carnegie Units of Instruction (as an indicator of background). We are attempting to determine which of these factors--or which combination of factors--provide an "early warning system," i.e., predict which students may either be dismissed for academic reasons or be placed on probation.

In a subsequent summary of continued research, McKibben (1983) reported that the use of the Brown-Carlsen Listening Comprehension Test successfully classified 65% of the students "at risk", while the Nelson-Denny Reading Test was a successful indicator of 60% of the cases. McKibben concluded that "listening scores seem to be slightly better at predicting group membership."

A search and review of the literature has failed to locate any continued use of the Brown-Carlsen Listening Comprehension Test or any other listening test to predict academic failure or success, yet it appears reasonable to expect some relationship between listening skills and subsequent academic work.

Listening Skills and Academic Work

Communication educators have long recognized that the basic skills in speaking and listening are necessary for successful completion of college studies and future success in one's selected vocation. Utilizing surveys conducted in business, such as that reported by Roos (1984) in the *Des Moines Register* and the comments of corporate leaders such as Iacocca (1984), educators have frequently used the need for skills as the rationale for speaking and listening training during the first year of college. Presumably the college student will use listening skills in all college courses, and the proper use of those skills will result in improved knowledge, understanding, comprehension, and application of that knowledge in college and on the job. However, if the rationale is correct, then one could expect that listening tests could be used to assess the teaching/learning of listening skills as well as predict the final success of the college student if listening tests measure skills needed to succeed. In fact, Watson, et al.(1991), maintain that the Watson-Barker Listening Test (WBLT) can be used as "a valid, reliable listening measurement tool to...identify listening skills that need improvement...[and to] assess the effectiveness of various instructional strategies...."(p.3) However, the need to identify improvement and assess effectiveness of instructional strategies assumes that the need for the improvement of listening is needed, at least, for subsequent academic work. Wolvin and Coakley (1994) state that "communication educators recognize competence in communication as a major focus both in the curriculum and in the assessment of the knowledge, behaviors, and attitudes that we work to develop with our students."(p. 148)

Given that assumed stance, Wolvin and Coakley have compiled a number of competency and skills lists, which range from the worker skills of Muchmore and Galvin to the comprehension competencies of the Wingspread Conference to listening components, but they had not completed a comparison of those lists. Wolvin and Coakley concluded that the major research questions include "How do current lists of characteristics of listening competency differ? How are they similar?"(p. 158)

A cursory, and somewhat intuitive, examination of the lists of skills and/or competencies identified and analyzed by Wolvin and Coakley indicate several basic skills implied by some or all. For example, to "recognize main ideas" (p. 153) from the Wingspread Conference assumes that the listener can also attend to and note the idea, the basic information, similar to "obtain necessary information" from the Muchmore and Galvin list (p. 153). To "discriminate between statements of fact and statements of opinion" assumes obtaining the needed information to know, to recognize opinion statements (p.152.) The Wingspread Conference list also includes "distinguish between facts and opinions" (p. 153). To "listen to comprehend the content of messages and the intent of speakers" from the Maryland list of goals (p. 155) assumes that the listener can first recognize information, file that information, and then manipulate that information. For college students as well as corporate employees, following directions (see p. 153) is another important skill in listening, which serves as the foundation for understanding the expectations of others (Muchmore and Galvin) and being able to respond to others' requests (Rhodes.) Binford (as quoted by Fitch-Hauser and Hughes in 1987) completed an analysis of 25 "different tests and found...that those tests supposedly covered 22 different listening skills" (p.132.) That list included the ability to follow directions and to

remember important details which would assume listening for and filing into memory, understanding meanings, and judging mood (see p. 132.)

Many of the skills common to the lists of skills and competencies discussed by Wolvin and Coakley and the skills compiled by Binford appear to be important skills for academic study and potential academic success. College students would be expected to listen for and to follow directions in order to complete assignments. They are required to attend to speakers/instructors, to detect and file in memory important details from lectures and discussions, to select and organize main ideas, to understand the implications and emotional impact of others' words. In short, it appears that college students need virtually all those skills and competencies to complete their academic work. It is that similarity of skills considered necessary for academic success that McKenzie and Clark (1995) consider to be the overwhelming direction of the cognitive dimensions of present listening tests.

If the focus of present listening tests is cognitive, then one could hypothesize that, since so much of the academic work at the college level is cognitively related, a listening test might be testing the same skills needed to succeed at college work. While no one test exists that would measure all cognitive skills needed and no test exists to test all sub-skills of listening, the congruence of the WBLT to those skills that appear to be common among the listening skills and competency lists could make it a viable test to predict success in academic work. Those listening skills common to the lists of skills included listening for information and filing that information in short term memory, listening to and following directions, listening for the implications and emotional character of others' statements, interpreting others' meanings. The WBLT claims to measure the same skills. It "measures the listener's skill in interpreting message content....,understanding the meaning of conversations...., remembering lecture information...., interpreting emotional meaning...., [and the] listener's ability to follow instructions."(Watson, et al., 1991, p. 2)

The research study

Dordt College is a small, private, four-year liberal arts, Christian college of 1300 students located in Northwest Iowa. The majority (approximately 75%) of its students are traditional students from private, Christian high schools distributed around the United States and Canada, however, over half (52%) come from Iowa, Minnesota, Nebraska, and South Dakota.

All students are required to take the one-semester, three credit speaking and listening course, and most students complete the course during their freshman year. The course begins with the WBLT Form A. Within the first two weeks of the course, the students study and discuss a chapter on listening including its value, the types of listening, and how to listen. During the course, students will complete two listening exercise tapes which also supply listening techniques, and the students will complete two sets of exercises during speeches given in class. The first exercise consists of listening to selected speeches and then completing a form which requires the speaker's purpose and main points. The second exercise, also during class speeches, requires students to recognize and record selected claims, the evidence to support those claims, the source of

the evidence, and the testing of that evidence. The final listening exercise is a speech criticism. At the end of the course, the WBLT Form B is administered as a posttest. The listening exercises during the speeches are graded. All grades and scores are recorded. The grades and scores of the 1997 BA degree graduates were collected to test the hypotheses of this research.

Given the commonness of listening skills and some of the skills important for academic work, one could expect that scores from WBLT would correlate with academic scores measured as Cumulative GPA.

Hypothesis 1--

The scores on the Watson-Barker Listening Test Form A and Form B will be significant predictors of GPA.

If the WBLT is a significant predictor of academic success, then the improvement demonstrated from pretest to posttest following training would predict higher academic grades assuming that the pretest and posttest are sufficiently similar. The WBLT has had means and standard deviations calculated on large, national populations. Since the difference in means between Form A and Form B is so small (Form A--58.8 and Form B--58.7) and the standard deviations demonstrating a decrease from Form A (7.6) to Form B (6.9) (Watson, et al., 1991, p. 13) then one would expect that an increase from pretest to posttest would correlate with GPA. The increase in score from Form A as pretest to Form B as post-test will be a significant predictor of academic success.

Hypothesis 2--

The difference in score from Watson-Barker Listening Test Form A to Watson-Barker Listening Test Form B will be a significant predictor of GPA.

Procedure

The population selected for this research was the students who graduated with BA degrees in May, 1997. While the college also has an Associate of Arts degree, those students were not considered part of the population in order to maintain a homogeneous group. Those students who had transferred to Dordt College after their Freshman year and had not taken the Fundamentals of Speaking and Listening course were also excluded. The result was 190 students included in this study. The WBLT Form A and Form B scores were collected from the instructors. Additional grades (those of the two listening exercises) were also collected to test their predictive value, but those tests are not included in this report. The final, cumulative GPA for each graduate was collected from the Registrar's office using two different sets of identification numbers to guarantee confidentiality.

The WBLT scores of Form A and Form B and the student GPAs were tabulated to determine maximum and minimum scores, means, and standard deviations. See Table #1. The scores for Form A and Form B were each related to student GPA, and the

difference between Form A and Form B was also related to student GPA using Pearson correlation. The significance levels using a 2-tailed test were calculated. See Table #3.

Results

The correlation values are found in Table #3. The significant correlation between Form A and Form B seems to indicate that Forms A and B are measuring skills which supports reliability. The significant correlations between Form A and GPA and Form B and GPA seem to indicate valid measurement of some of the same cognitive skills as those needed for successful academic work when academic work is measured by GPA. The significant relationships of Form A and Form B to GPA would appear to support the first hypothesis--the scores on the WBLT will be significant predictors of GPA, but when calculating the GPA variance accounted for (indicating the accuracy of prediction) by Form A and Form B with GPA (r x 100), Form A predicts 6% of the variance in GPA, while Form B predicts 8% of the variance in GPA.

If the scores on the WBLT were significant predictors of GPA, then one would anticipate that an increase in scores from Form A to Form B would also serve as a predictor of GPA because an improvement in those listening skills associated with academic work should indicate improved GPA. The test of the difference from Form A to Form B related to GPA failed to be significant. This test failed to support the second hypothesis--the difference in score from WBLT Form A to WBLT Form B will be a significant predictor of GPA. However, the correlation of Form B to GPA was higher than the correlation of Form A to GPA.

Table #1
General Population Statistics

	N	Minimum	Maximum	Mean	Std. Dev.
Form A	190	36.0	94.0	66.153	9.429
Form B	190	.0*	98.0	81.558	9.712
GPA	190	2.1	4.0	3.292	.475

* One student in the population did not take Form B. Otherwise the minimum would be 58.0.

Table #2
Gender Statistics

Male	N	Form A	Form B	GPA
Mean	93	65.785	81.484	3.155
Std. Dev.		10.448	8.182	.460
Female				
Mean	97	66.505	81.629	3.424
Std. Dev.		8.377	11.024	.454

Table #3
Correlations

	Form A	Form B	GPA	Form A/B Dif.
Form A	1.000	.323**	.251**	--
Form B	.323**	1.000	.294**	--
GPA	.251**	.294**	1.000	.044
Sig. (2-tailed)				
Form A	--	.000	.000	--
Form B	.000	--	.000	--
GPA	.000	.000	--	.543

**.Correlation is significant at the 0.01 level (2-tailed) N=190

One possible explanation for the failure to support the second hypothesis is that the amount of variance accounted for in GPA by Form B is low enough (8%) that it is colored by the remaining variance of GPA. A second explanation might be that students with higher GPA attained high scores on Form A and the difference between their scores on Form A and Form B was not as great as the difference between scores for students with lower GPA.

The population that was tested could be a factor in the results and might lend a possible explanation for the failure to support the hypotheses. A review of the statistics for the general population (Table #1) indicates some differences from the reported means and standard deviations for the WBLT. The means for both Form A and Form B are considerably higher for the tested population than the population used by Watson et al. The WBLT means are listed as 58.8 and 58.7, while the means for the tested population were 66.15 and 81.55 for Forms A and B respectively. The mean for Form B of the tested population is 22.8 percentage points higher than the mean reported by Watson et al.(1991.) The standard deviations for the tested population also differ from those reported by Watson et al. The standard deviations reported by Watson et al. are 7.6 and 6.9 while the corresponding standard deviations for the tested population are 9.429 and 9.712 respectively. While the means are considerably higher for the tested population, the standard deviations are also larger. One might conclude that the high test scores and the size of the tested population (N=190) have actually contributed to the significance levels while not yielding higher correlations, particularly for the correlation of the difference between Form A and Form B with GPA. This explanation, however, does not recognize that the tested population was tested with itself and not against a different population. Any increase in scores would be within the population.

An examination of possible differences in gender also fails to supply an explanation for only moderate support of hypothesis 1 and failure to support hypothesis 2. (Table #2) The population is balanced for gender. The means scores for males and females on both Form A and Form B are very close. The only variation of any note is the difference in GPA between male and female, but that difference is not significant.

Past education (elementary and high school) would not likely be a factor. In my research conducted in the 'feeder' schools, little or no teaching of listening was occurring (Vander Kooi, 1978), and subsequent informal checks on students' past training in listening indicate no change. I believe that one can conclude that past education of this population is no different from that of the general population in the training of listening.

It appears that the character of the WBLT, both Form A and Form B, are sufficiently alike and measure the same set of skills that are common with some basic academic skills to be significantly correlated with GPA at the .251 and .294 levels, but the predictive values of the correlations are low and any change in scores from Form A to Form B do not correlate with GPA.

Discussion

For years Communication educators have advocated increasing listening skills and have appealed to comments from business persons and other educators as the rationale for training in listening. For years those same Communication educators have accepted the grounds that better listening will result in better relationships, better knowledge, and a better education. They have also recognized the role that motivation plays in listening. There is, therefore, a particular appeal to knowing that attaining a good grade in listening will predict good grades in other classes. One could even consider it a good step in motivating students, if he/she could say that a particular test will predict future grade point average and that after some study and training, an increase in a test grade will show that better grades are attained. One might conclude that the results of this study do allow the conclusion that this particular test, the WBLT, does significantly predict a percentage of future GPA. The context of this research gives some credence to the conclusion. Both Form A and Form B were administered in the first-year college speaking/listening course. The tests were not graded so the results had to depend upon the student's personal motivation. Training and the study of listening occurred between the two tests and the scores increased dramatically. Those test scores were correlated to the final GPA of students who graduated three or three and one half years after taking the first-year course.

While Communication Educators might wish to increase student motivation by reporting a significant correlation between listening test scores and GPA, there are reasons to question that use of current research information. Fitch-Hauser and Hughes (1992) recognize that listening tests have "fallen short of that [reliability and validity] needed to develop a conceptual underpinning for listening."(p. 8) In an earlier study they attempted a factor analysis of four listening tests including the WBLT and concluded that "these tests are not homogeneous. That is they are testing something in addition to listening." (1987, p.146) The same conclusion could be made about the results of this research. The WBLT could be predicting a limited percentage of the variance in GPA, but it appears to be doing so because it is measuring some of the same skills that are required by GPA--those skills might or might not all be listening skills. For example, the WBLT, as do many listening tests, assumes a common vocabulary of the verbal and the nonverbal. The nonverbal vocabulary is most evident in the section which tests the meaning of conversations, Part II. An informal research conducted by another member

of the Communication Department at Dordt College has found that Part II of the WBLT has the lowest scores on Form A which coincides with the scores reported by Watson et al. (1991), but those same students show the greatest amount of improvement in that same section on Form B--beyond the mean reported by Watson et al. I suspect the difference is nonverbal vocabulary. Informally, students report greater difficulty with accent with Form A than with Form B. Other skills might also be in play--skills that are necessary for successful academic work. Those skills might or might not be the same as the skills considered listening skills. The congruence between a package of common skills in the WBLT and those needed for academic work might be an explanation for the significance levels of the correlations to support hypothesis 1 and the lack of support for hypothesis 2. In other words, whatever the WBLT is evaluating, it is evaluating some, albeit a low percentage, of the same set of skills needed to gain a higher GPA, whether or not those skills are listening skills.

With Fitch-Hauser and Hughes (1987), as well as others, the results of this research call for continued analysis and research on the validity of listening tests beyond face validity and validity found in a factor analysis of a variety of listening tests. The goal is still there--be able to demonstrate that improvement in listening skills as demonstrated in a standard test will result in a greater likelihood of academic success.

However, future research should also extend beyond that of skills, if a listening test is to predict academic success. As Wolvin and Coakley (1994) note--"listening competence must...extend to *attitudes* and *knowledge*"--presumably a knowledge of the communication content (p. 153.) Wolvin and Coakley also note that "the development of listening attitudes must be part of any solid listening education" (p. 153.) I would assume that motivation would be an important part of that attitude training. I have observed students who had low WBLT scores attain high GPAs. Their motivation and work ethic appeared to account for high achievement during college studies.

Until the time that a clear understanding of the relationship between the WBLT and GPA is attained, Communication educators can still use listening tests to assist in analysis of listening and to ascertain, within the scope of the individual test, what improvements might be made by students from pretest to posttest. We can use the results circumspectly, while continuing to push for theory development and test validity beyond what we now have. However, I believe that attempting a prediction of academic success based on listening test scores is hazardous. Communication educators will have to continue to rely on employer surveys and the logical associations of skills to justify teaching listening at the college and university level.

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